WHAT IS CLAIMED IS:

Sub B1

1. A test set for testing a communications network comprising:

at least one signal input port;

test circuitry coupled to the at least one signal input port, the test circuitry receiving signals from the signal input port and generating test data;

a processor coupled to the test circuitry, the processor receiving test data and generating test results;

a user input device coupled to the processor, the user input device sending commands to the processor; and

a display operatively coupled to the processor, the display receiving and showing the test results,

wherein the test set is capable of performing line qualification and connectivity testing.

2. The test set of claim 1 wherein line qualification includes transmission line tests, the transmission line tests includes at least one of digital multimeter tests, transmission impairment measurement set (TIMS) tests, and time domain reflection (TDR) tests.

3. The test set of claim 1 wherein the display is a graphical display.

4. The test set of claim 3 wherein the graphical display shows selected ones of the test results in a graphical form.

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5. The test set of claim 1 ~~wherein the~~ connectivity testing ~~includes~~ bit-error-rate testing and ~~loopback~~ testing.

6. The test set of claim 1 wherein connectivity testing is performed using a predetermined transmission technology.

7. The test set of claim 6 wherein the predetermined transmission technology is one of E1, T1, ISDN, DSL, HDSL, ADSL, and xDSL.

8. The test set of claim 1 wherein the test set is battery powered.

9. The test set of claim 1 wherein the test set is a portable unit.

10. The test set of claim 1 wherein the test set is a hand held unit.

11. The test set of claim 1 wherein the test set weighs less than three pounds.

12. The test set of claim 1 further comprising:
a modem module operatively coupled to the processor, the modem module receiving and processing the test data and generating processed results, and
wherein the display receives and displays the processed results.

13. The test set of claim 12 wherein the modem module includes
a device for storing an identification value that identifies the modem module to the test set.

14. The test set of claim 12 wherein the modem module is configured to perform xDSL connectivity testing.

15. The test set of claim 12 wherein the modem module is configured to perform ATM connectivity testing.

Sub B2 16. A telecommunications transmission test set comprising:
at least one signal input port;

test circuitry coupled to the at least one signal input port, the test circuitry receiving signals from the signal input port and generating test data;

a processor coupled to the test circuitry, the processor receiving test data and generating test results;

a modem module operatively coupled to the processor, wherein the modem module, when directed, receives and processes the test data to generate processed results, and wherein the processor generates the test results based, in part, on the processed results;

a user input device coupled to the processor, the user input device sending commands to the processor; and

a display coupled to the processor, the display receiving and displaying the test results,

wherein the test set is configurable to perform line qualification or connectivity testing as selected by a command received from the user input device.

17. The test set of claim 16 wherein line qualification includes digital multimeter tests, time domain reflection tests, and transmission line impairment tests.

18. The test set of claim 16 wherein connectivity testing includes bit-error-rate testing and loopback testing.

19. The test set of claim 16 wherein connectivity testing can be performed using a predetermined transmission technology.

20. The test set of claim 16 wherein the test set is a portable unit.

21. The test set of claim 16 wherein the test set is a hand held unit.

Sub B3

22. A test set for testing ~~a communications network~~ comprising:

a master tester unit for receiving a signal from the communications network and processing the signal to produce intermediate results; and

a modem module coupled to the master tester unit, wherein the modem module receives and processes the intermediate results and provides the processed results to the master tester unit,

wherein the test set is configurable to perform line qualification and connectivity testing, and wherein the master tester unit displays the processed results.

23. The test set of claim 22 wherein the master tester unit includes

a graphical display for showing the test results in graphical form.

24. The test set of claim 22 wherein the modem module includes

a memory for storing an identification value that identifies the modem module to the master tester unit.

25. The test set of claim 22 wherein the modem module determines a maximum transmission rate on the communications network based on the processed results.

26. A hand-held device for testing communications networks comprising:

at least one signal input port;

test circuitry coupled to the at least one signal input port, the test circuitry receiving signals from the signal input port and generating test data;

a processor coupled to the test circuitry, the processor receiving test data and generating test results;

a user input device coupled to the processor, the user input device sending commands to the processor; and

a display coupled to the processor, the display receiving and displaying the test results.

27. A method for graphically displaying test results of a test of a digital communications network comprising the steps of:

receiving signals from at least one signal input port, the signals being responsive to the test being conducted;

processing the signals to generate test results; and

displaying the test results in graphical form,

wherein the test can be one of line qualification or connectivity test of the digital communications network.

Add A2

add B6